

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

Office of Fire and Aviation
3833 South Development Avenue
Boise, Idaho 83705

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Instruction Memorandum No. OF&A 2002-009
Expires: 09/30/03

To: All Field Officials

From: Director, Office of Fire and Aviation

Subject: Project 25 Digital Radio Standard and Radio Support for BLM Cooperators

Program Area: This Instruction Memorandum (IM) applies to the Bureau of Land Management's (BLM) National Fire Plan and Rural Fire Assistance Program.

Purpose: This IM will provide clarification and guidance concerning Instruction Memorandum No. 2002-052, signed December 13, 2001, and a follow-up memorandum dated December 17, 2001. Each memorandum pertained to the Project 25 Digital Radio Standard and radio support for BLM cooperators.

Background: The wireless telecommunication office at NIFC has provided the following background of the P25 standard and narrowband issue. This may be of help as local offices work with their cooperating partners on this issue.

Narrowbanding and APCO 25 Summary

Congress has mandated a complete restructuring of the Federal radio frequency spectrum within the United States. As a result of this mandate, the National Telecommunications and Information Administration (NTIA) has required all **Federal** VHF radios (radios that operate on frequencies between 148 Mhz and 174 Mhz) to be "narrowbanded" by January 1, 2005.

Narrowbanding means that all radio channels (assigned operating frequencies) will now occupy only one half of their former bandwidth. For example, existing frequency assignments of 168.050 and 168.075 have a 25 KHz difference between them. By narrowbanding, the radios will still be capable of 168.050 and 168.075 operation, but will additionally operate on 168.0675, a frequency that is only 12.5 KHz different than the existing frequencies. This "narrowing" will apply across the full range of frequencies used for our operations. This will create new frequencies that will be allocated beginning year 2005. Radio systems that do not operate in the narrowband mode, after this date, and interfere with other systems will be required to be turned off immediately until the problem is rectified.

Federal, state and local government, in direct cooperation with the Association of Public-safety Communications Officials-International (APCO), developed an interoperability standard for analog wideband, analog narrowband, and digital modes. That was to ensure "forward and backward compatibility." This capability allowed the new radios to interoperate with different vendor equipment and ease the transition toward digital while the new technology became more widely deployed. The new Federal telecommunications standard is "TIA/EIA 102" but is commonly referred to as "APCO Project 25," or P-25.

The Department of the Interior further required all radios purchased after March 4, 1996, not only comply with the NTIA narrowband mandate but also be P-25 compliant. The new P-25 radios will provide numerous additional capabilities very beneficial, and in some cases required, for systems users.

Extensive testing of the new P-25 radios has shown that:

- There is virtually no coverage differences between analog and P-25 digital transmissions
- There is full backwards compatibility in a P-25 VHF compliant radio, i.e., they will talk and receive with existing analog wideband or narrowband radio equipment, as well as working with all new digital narrowband radio equipment.
- There is full interoperability between all P-25 compliant radios.
- Digital radio provides superior received audio quality in marginal signal areas.
- Manufacturer's support of their newer products is outstanding. They are doing everything possible to correct any discovered problems or deficiencies.
- Equipment costs are steadily decreasing, and it is expected that this trend will continue.
- The manufacturers are continuing the development of their products, continually adding more functionality.
- The digital radio provides an excellent platform for the addition of future capabilities, where the analog radio is at its full potential for enhancements.

Policy/Action: All BLM offices will be upgrading radios to meet the new standards for P-25 compliance. As the older, outdated radios are replaced, they may be loaned for a limited time to cooperating rural and volunteer fire departments in an effort to ensure safety and adequate communications between BLM and such departments. Radios, determined by the BLM radio technician staffs, to have exceeded their life cycle and not maintainable will not be part of this

loan process. This guidance will enable field offices to ease the transition to P-25 standards, and simultaneously aid rural departments in maintaining immediate communications capability with BLM as necessary, with safety as the primary goal.

It is emphasized that this is only a temporary measure, and will not resolve the longer term issue of rural and volunteer departments upgrading their communications equipment to meet Project 25 standards. Decisions on entering into such loans will be under the guidance of individual State Directors.

Under the Reciprocal Fire Protection Act (69 Stat. 66; 42 U.S.C. 1856a) and other authorities cited in 910 DM and within established cooperative agreements, field offices may provide to cooperating rural/volunteer fire departments, on a loan basis, radios and equipment to ensure that necessary communication capability is present for wildland fire and related events. This is in line with the National Fire Plan and Rural Fire Assistance (RFA) language. In making such loans, the following will apply:

Such activities will be only with rural/volunteer fire departments that have a cooperative agreement with BLM in place. Under that umbrella the following applies:

The loans of retired radios will be accompanied by an additional written stipulation between the rural department and BLM with the following understanding:

1. Loaned radios will have a tracking number assigned and will be inventoried on a yearly basis by the appropriate BLM official.
2. Radios will remain the property of BLM.
3. Cooperating rural departments will maintain and repair radios as necessary to ensure they remain in proper working order.
4. As a safety measure, the radios will be used by the cooperating department for response to fires on or near DOI administered lands.
5. BLM will not be held liable for injury, death or damage due to improper maintenance and /or use of these radios.
6. A radio replacement plan will be developed, to begin in FY03, to ensure the loaner radios will be retracted by November 30, 2004, to avoid communications interruptions by the cooperators.
7. RFA Grants, or portions thereof, and other funding sources, used to procure radios for the cooperating department, will be for P-25 compliant equipment.

Coordination: This guidance was developed in coordination with the BLM Office of Fire and

Aviation Information Resources Management Group, National Wireless Technology Support Unit, and National Telecommunications Policy and Guidance.

Timeframe: This IM is effective upon receipt.

Budget Impact: Minimal. Work can be accomplished on a routine basis as part of ongoing cooperative program activities between local BLM offices and rural/volunteer departments.

Manual/Handbook Sections Affected: None

Contact: If you have questions regarding this policy, you can contact Dave Vickery, 208-387-5272, or Al Murphy, 208-387-5169, at BLM's Office of Fire and Aviation at NIFC. Technical questions can be directed to John Gebhard, 208-387-5164, at the Office of Fire and Aviation IRM group, or Rhonda Toronto, 208-387-5666, at the National Wireless Technology Support Unit in Boise.

Signed by:
Timothy M. Murphy
Acting Director
Office of Fire and Aviation

Authenticated by:
Pat Lewis
Supervisory Mgmt. Asst.
Office Services

Distribution:
Anne Jeffery, 5627 MIB
Jay Thietten, 5627 MIB
Cyndie Hogg, NARTC
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